

### **REMARKS**

In the Office Action, the Examiner rejected claims 1-23. By the present Response, Applicants have amended claims 1, 9 and 16, and canceled claims 3 and 18. Claims 1, 2, 4-18, and 19-23 remain pending in the present application and are believed to be in condition for allowance. In view of the following remarks, Applicants respectfully request reconsideration and allowance of all pending claims.

#### **Claim Rejections Under 35 U.S.C. § 103(a)**

In the Office Action, the Examiner rejected claims 1-3, 5-11, 14-18 and 20-23 under 35 U.S.C. § 103(a) as being unpatentable over Reudink et al., U.S. Publication No. 2004/0235527 (hereinafter "Reudink") in view of Walton et al., U.S. Patent No. 6,744,743 (hereinafter "Walton"); and rejected claims 4, 12, 13, and 19 under 35 U.S.C. § 103(a) as being unpatentable over Reudink in view of Walton, and further in view of Wiederman et al., U.S. Publication No. 2002/0039900 (hereinafter "Wiedeman"). Applicants respectfully traverse these rejections.

#### ***Legal Precedent***

The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (B.P.A.I. 1979). To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 180 U.S.P.Q. 580 (C.C.P.A. 1974). However, it is not enough to show that all the elements exist in the prior art since a claimed invention composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. *KSR International Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1741 (2007). It is important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. *Id.* Specifically, there must be some articulated reasoning with a rational underpinning to support a conclusion of obviousness; a conclusory statement will not suffice. *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006). Indeed, the factual inquiry determining whether to combine references must be thorough and searching, and it must be based on *objective evidence of record*. *In re Lee*, 61 U.S.P.Q.2d 1430, 1436 (Fed. Cir. 2002).

Moreover, the Applicant submits that, during patent examination, the pending claims must be given an interpretation that is *reasonable* and *consistent* with the specification. *See In re Prater*, 162 U.S.P.Q. 541, 550-51 (C.C.P.A. 1969); *In re Morris*, 44 U.S.P.Q.2d 1023, 1027-28 (Fed. Cir. 1997); see also M.P.E.P. § 2111 (describing the standards for claim interpretation during prosecution). Indeed, the *specification* is “the primary basis for construing the claims.” *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1315 (Fed. Cir. 2005) (citations omitted). It is usually dispositive. *See id.* Interpretation of the claims must also be consistent with the interpretation that those skilled in the art would reach. *See In re Cortright*, 49 U.S.P.Q.2d 1464, 1468 (Fed. Cir. 1999); *see also* M.P.E.P. § 2111. That is, recitations of a claim must be read as they would be interpreted by those of ordinary skill in the art. *See Rexnord Corp. v. Laitram Corp.*, 60 U.S.P.Q.2d 1851, 1854 (Fed. Cir. 2001); *see also* M.P.E.P. § 2111.01. In summary, an Examiner, during prosecution, must interpret a claim recitation as one of ordinary skill in the art would reasonably interpret the claim in view of the specification. *See In re American Academy of Science Tech Center*, 70 U.S.P.Q.2d 1827 (Fed. Cir. 2004).

***Reudink and Walton fail to disclose all the features of claims 1, 9 and 16***

With respect to claim 1, 9 and 16, the Examiner stated:

For claims 1, 9 and 16, Reudink teaches that a communication system (**Abstract and figs. 1, 2A-2D, 3A-3C and 4, paragraph 0014**), comprising:

A beam former (**paragraphs 0052 and 0054**) that is adapted to provide a plurality of beams (**multiple antenna beams, abstract, paragraphs 0014 and 0054**) each of the plurality of beams providing a communication for a corresponding coverage envelope (**coverage in area 360, paragraph 0014**), the plurality of coverage envelopes comprising at least one pair of overlapping coverage envelopes (**overlapping, paragraph 0014**) and at least one pair of non-overlapping coverage envelopes (**non-overlapping, paragraphs 0014**); and

The scheduling being adapted to assign the same system resources from the group of shared system resources for use during simultaneous data transmission to a receiver in each of the coverage envelopes that comprises the at least one pair of non-overlapping coverage envelopes (**use of CDMA to code share a single resource among multiple users, refer to paragraph 0052**);

Non-overlapping coverage envelope, **(non-overlapping antenna beams to provide directional wireless signal coverage, refer to paragraph 0014 and abstract); (Note: Reudink uses a code as a single source to multiple users who may at different coverage areas.)**

**Reudink does not teaches explicitly the following limitations, which are disclosed by Walton, as follows:**

A scheduler **(schedule terminals and assign channels, paragraph 0118)** that assigns system resources from a group of shared system resources to a plurality of receivers distributed throughout the coverage envelopes **(scheduling of resources by using Code Division Multiplexing, paragraph 0061),.**

It would have been obvious to the person of ordinary skill in the art at the time the invention to use a scheduler that assign system resources from a group of shared system resources to a plurality of receivers distributed throughout the coverage envelopes, as taught by Walton. The combination of non-overlapping coverage area with sharing of resources can be implemented by Base Station. The motivation for using this capability is to achieve increased capacity and/or desired levels of throughput, quality of service.

Office Action, pages 3-4. Applicants respectfully traverse the rejection.

The instant application describes a system and method for providing multi-beam scheduling. In particular, embodiments disclosed in the specification may improve throughput in a fixed beam network by providing a system and method in which user signals employ beam multiplexing as well as code multiplexing so that signal transmissions in non-overlapping beams reuse channelization codes. Specification, page 8, lines 10-15. Thus, a specific channelization code may be available for use in coverage envelopes created by more than one beam if that channelization code is not being simultaneously used in conjunction with a beam that provides an overlapping coverage envelope. *See id.* at page 12, lines 16-21; page 13, lines 10-11; page 14, lines 19-22. As such, the claims are directed to the simultaneous use of channelization codes in non-overlapping coverage envelopes.

Independent claim 1 recites, *inter alia*, “a scheduler...being adapted to assign the same system resources from the group of shared system resources for use *during a simultaneous data transmission* to a receiver in each of the coverage envelopes that comprises the at least one pair of non-overlapping coverage envelopes, *wherein the group of shared*

*system resources comprises a group of channelization codes.*” (Emphasis added).

Independent claim 9 recites, *inter alia*, “A method ... comprising the acts of: assigning the same system resources for use during a *simultaneous data transmission* to a receiver in each of the coverage envelopes that comprises the at least one pair of non-overlapping coverage envelopes, *wherein the group of shared system resources comprises a group of channelization codes.*” (Emphasis added). Independent claim 16 recites, *inter alia*, “means for assigning system resources...being adapted to assign the same system resources from the group of shared resources for use *during a simultaneous data transmission* to a receiver in each of the coverage envelopes that comprises the at least one pair of non-overlapping coverage envelopes, *wherein the group of shared system resources comprises a group of channelization codes.*” (Emphasis added).

In sharp contrast, Reudink and Walton, alone or in combination, do not disclose anything with respect to assigning the same system resources from the group of shared system resources for use during a *simultaneous data transmission*, wherein the same system resources comprise a *group of channelization codes*, as set forth in the claims. Specifically, Reudink simply discloses implementation of CDMA to code share (i.e., use coding to share) RF channels among multiple users. *See* Reudink, paragraph 25. Thus, in contrast to the claimed subject matter of the instant application, Reudink discloses multiplexing multiple codes within a single beam and not the same channelization code being assigned for simultaneous use in non-overlapping coverage envelopes. As such, Reudink does not disclose all the features of independent claims 1, 9 and 16.

The Walton reference fails to overcome the deficiencies of Reudink with respect to independent claims 1, 9 and 16. Walton discloses an adaptive reuse scheme wherein resources may be reallocated to match system conditions. *See* Walton, col. 9, lines 16-40. However, there is nothing in Walton that discloses assigning the same system resources from the group of shared system resources for use during a *simultaneous data transmission*, wherein the same system resources comprise a *group of channelization codes*, as set forth in the instant claims. As such, Walton cannot possibly overcome the deficiencies of Reudink with respect to the independent claims 1, 9 and 16.

Accordingly, Applicants respectfully assert that Reudink and Walton, taken alone or in combination, fail to disclose all the features of independent claims 1, 9 and 16 and, therefore, cannot support a *prima facie* case of obviousness under Section 103. As such, Applicants respectfully request withdrawal of the Section 103 rejection and allowance of claims 1, 9 and 16, as well as all claims depending therefrom.

***Wiedeman fails to overcome the deficiencies of Reudink and Walton***

As mentioned above, claims 4, 12-13 and 19 were rejected as being unpatentable over Reudink in view of Walton and, further, in view of Wiedeman. Applicants respectfully traverse the rejection and assert that Wiedeman fails to overcome the deficiencies of Reudink and Walton. In particular, Wiedeman does not disclose assigning the same system resources from the group of shared system resources for use during a *simultaneous data transmission*, wherein the same system resources comprise a *group of channelization codes*, as set forth in claims 1, 9 and 16. As such, Reudink, Walton and Wiedeman, taken alone or in combination, fail to disclose all the elements of independent claims 1, 9 and 16 and cannot support a *prima facie* case of obviousness under Section 103. Based on their respective dependencies from independent claims 1, 9 and 16, Applicants respectfully request withdrawal of the Section 103 rejection and allowance of claim 4, 12-13 and 19.

**Payment of Fees and General Authorization for Extensions of Time**

In accordance with 37 C.F.R. § 1.136, Applicants hereby provide a general authorization to treat this and any future reply requiring an extension of time as incorporating a request thereof. The Commissioner is authorized to charge \$120.00 to the credit card listed on the attached PTO-2038 for a one-month extension of time. Additionally, if any fees, including fees for extensions of time and other reasons, are deemed necessary to advance prosecution of the present application, at this or any other time, Applicants hereby authorize the Commissioner to charge such requisite fees to Deposit Account No. 06-1315; Order No. LUCW:0008.

**Conclusion**

In view of the remarks and amendments set forth above, Applicants respectfully request allowance of the pending claims. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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